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EXAMINER

YU, GINA C

ART UNIT	PAPER NUMBER
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1617

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Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/692,716
Filing Date: October 20, 2000
Appellant(s): DECOSTER ET AL.

Paper No. 20

*mailed out
date 8-26-03*

Mark D. Sweet
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 4, 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

The appellant's statement in the brief that certain claims do not stand or fall together and separately patentable as suggested by appellant is not agreed with. Claims 1, 92, 101, 102, 103, and 104 are independent claims. Claims 2-91 depend on claim 1. Claims 93-100 depend on claim 92, and are rejected under the same rejection as claims 64-92. Claims 1 and 101-104 are rejected under the rejection. Claims as grouped by applicants are not patentably distinct from one another, and applicants present no argument or explanation why the claims do not stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,166,093	MOUGIN	12-2000
6,150,311	DECOSTER ET AL.	11-2000
6,039,936	RESTLE ET AL.	03-2000
4,237,243	QUACK ET AL.	12-1980
EP 0874017 A2	DALLE ET AL.	10-1998
Zviak, C., The Science of Hair Care, (1986), Marcel Dekker, Inc. pp. 68-70.		

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

(A) Claims 1-18, 21, and 101-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle et al. (EP 0874017) taken with Zviak (The Science of Hair Care, p. 68-70).

Dalle et al. teach a method of making silicone in water emulsions for cosmetic products, comprising at least one polysiloxane identical to formula (I) in claim 1 and at least one surfactant among anionic, nonionic, amphoteric, and cationic surfactants. The particle size of the silicone copolymer is also in the range of 0.3 – 100 μm , which meets claims 11-12. See p. 5, lines 35-41. In the reference, 9 parts by weight of polysiloxane is used. See instant claims 13, 15, and 16; Examples 1-3 on p. 6. Although the reference suggests adding conventional ingredients including suspending agents and

polymers in the composition, the reference lacks a specific mention of using non-cellulose thickener. See p. 6, lines 1-4.

Zviak teaches thickeners for shampoo formulations. See p. 69. The thickeners listed in the reference include natural gums, including karaya, and carboxyvinyl polymers of the Carbopol type. See instant claims 17, 18, and 21.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition in Dalle et al. by adding conventional non-cellulose thickeners in Zviak because of the expectation to have produced hair care compositions with desired viscosity.

(B) Claims 1-19, 20, 22, 24, and 101-104 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dalle et al. in view of Quack et al. (U.S. Pat. No. 4,237,243).

Dalle et al. is discussed above. The reference lacks the teaching of using non-cellulose thickening agents in the composition.

Quack et al. teaches the use of crosslinked polymers for increasing the viscosity in cosmetic compositions. The reference teaches the use of the water-soluble copolymers of acrylamide or acrylic acids. See instant claims 17, 19, and 20. See col. 3, line 8 – col. 4, line 27. For claim 22, see col. 4, lines 5 – 19. The use of thickeners in natural origin is also disclosed in col.1, line 40. See instant claim 18. Claim 24 is met by the disclosure, which illustrates formulations for cleansing liquid solutions comprising polyethylene glycols. See Examples in col. 14, lines 21 – 31; col. 15, lines 2 – 12. The reference teaches that the polymers in that invention have high swelling power, which is

particularly appropriate as a thickening agent in cosmetic compositions. See col. 7, lines 27 – 47.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition in Dalle et al. by adding the thickeners disclosed in Quack et al. because of the expectation to have produced cosmetic compositions with desired viscosity.

(C) Claims 1-19, 22, 23, 25-36, and 101-104 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dalle et al. in view of Mougin et al. (U.S. Pat. No. 6,166,093).

Dalle et al. is discussed above. The reference lacks the teaching of using non-cellulose thickening agents in the composition.

Mougin et al. describe cosmetic compositions comprising silicone-grated polyurethane and/or polyurea block polycondensation products. See col. 1, lines 8 – col. 2, line 55; col. 14, line 63 – col. 15, line 27. The reference teaches that the composition may additionally comprise conventional thickeners, including;

(1) guar gum and xanthan gum (see instant claims 17-18);

(1) “Bozopol C”, the crosslinked acrylamide and ammonium acrylate polymers, (see instant claims 19, 22, 23 and 25-28);

(2) “Sepigel 305”, the crosslinked acrylamide and 2-acrylamido-2-methylpropanesulphonic acid polymers, partially or totally neutralized, (see instant claims 19, 22, 23 and 29-31);

(3) “Salcare SC95”, the crosslinked acrylamide and

methacryloyloxyethyltrimethylammonium chloride polymers (see instant claims 19, 22, 23, 32, and 33);

(4) the crosslinked homopolymers of methacryloyloxyethyltrimethylammonium chloride, (see instant claims 19, 22, and 23).

See col. 15, line 39 – col. 16, line 35. Example 10 illustrates a formulation for mascaras which employs 2 % by weight of gum arabic, which is considered to be a natural thickener. See instant claims 34-36.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions in Dalle et al. by adding the conventional thickening agent taught by Mougin et al. because of the expectation to have produced cosmetic compositions with desired viscosity.

(D) Claims 37-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle et al., and Mougin et al. as applied to claims 1-19, 22, 23, 25-36, and 101-104 above, and further in view of Restle et al. (U.S. Pat. No. 6,039,936).

Dalle et al. and Mougin et al. are discussed above. The combined references lack a mention that the specific surfactants in claims 37 - 63 may be used in the composition.

Restle et al. teach cosmetic oil-in-water emulsions comprising nonionic amphiphilic lipids (silicone surfactants) and cationic amphiphilic lipids. The patent describes the cationic amphiphilic lipids from the group formed by quaternary ammonium salts. See col. 3, line 4 – col. 6, line 12. See instant claims 37 - 60. Examples 1 and 2 in the references also teach employing 1.5 % of the disclosed

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cationic amphiphilic lipids. See instant claims 61-63. The reference further teaches that the advantages of the compositions include an enhanced penetration of active cosmetic ingredients on hair, and glossy appearance without greasy feel and softness. See col. 1, lines 36-49.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the compositions in the combined references by adding the cationic surfactants of the quaternary ammonium salts in Restle et al. because of the expectation to have produced compositions which would enhance penetration of actives and glossy appearance, and softness on hair, as taught by Restle et al.

(E) Claims 64-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle et al. and Mougin et al. as applied to claims 1-19, 22, 23, 25-36, and 101-104 above, and further in view of Decoster et al. (U.S. Pat. No. 6,150,311).

Dalle et al. and Mougin et al. are discussed above. The combined references lack a mention that the specific surfactants in claims 64-89 may be used in the composition.

Decoster et al. describe cosmetic compositions for cleansing and conditioning keratinous materials. The compositions in the reference comprise of insoluble silicone and a washing base, which is a mixture of anionic, amphoteric, nonionic and cationic surfactants. The reference teaches that the compositions comprise 4-50% by weight of the washing base. See col. 1, line 1 – col. 2, line 28; instant claims 64-67. The anionic surfactants in claims 68-75 are disclosed in col.2, lines 32 – 67; the nonionic surfactants in claims 76-79, in col. 3, lines 1-31; the amphoteric surfactants in claims 80-84, in col.

3, line 32 - col.4, line 13. The reference further teaches that the most preferred mixture of the surfactants comprise anionic and amphoteric surfactant, of which the examples are disclosed in col. 4, lines 14-38. See instant claims 85-89. The reference further teaches that 0.001 – 10% by weight of cationic polymers may be employed in the composition. See col. 7, line 9 – col. 8, line 9; instant claims 90 and 91. The method of using the compositions is disclosed in col. 8, lines 20- 44. See instant claims 92-104. The reference teaches that a stable detergent composition having excellent cosmetic properties may be formulated from insoluble silicones in the washing base described above. See col. 1, line 55 – col. 2, line 5. The reference further teaches optional use of cationic surfactants, including quaternary ammonium salts and imidazoline derivatives.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the compositions in the combined references by adding the surfactants disclosed in Decoster et al., because of the expectation to have produced stable cleansing compositions for keratinous materials which retain the advantages of cosmetic properties of the actives, as taught by Decoster et al.

(11) Response to Argument

(A) Issue 1: Claims 1-18, 21, and 101-104 rejected under 35 U.S.C. § 103(a) over Dalle in view of Zviak.

The broadest claim in this case is directed to a composition comprising a cosmetically acceptable medium, at least one non-cellulose thickener, and at least one silicone copolymer as specified in claim 1; and method of using and making the said composition. Examiner takes the position that the present invention is an obvious

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variation of prior arts of record, since the composition comprises old and well known cosmetic ingredients, and applicants have not shown unexpected benefits by clear and convincing evidence that is commensurate with the scope of the claims.

It is generally considered prima facie obvious to combine two compounds each of which is taught by the prior art to be useful for the same purpose, in order to form a composition which is to be used for the very same purposes. The idea for combining them flows logically from their having been used individually in the prior art. See In re Kerkhoven, 626 F.2d 848, 850, 205 U.S.P.Q. 1069, 1072 (C.C.P.A. 1980).

In this case, Dalle teaches that the prior art silicone copolymer is useful for hair care products such as shampoo. See Dalle, p. 5, lines 47-57. Zviak teaches that non-cellulose thickeners are conventional ingredients used in shampoo formulations. See Zviak, p. 69. As shown by the recited teachings, the instant claims define nothing more than the concomitant use of two conventional shampoo ingredients. It would flow that the recited claims define prima facie obvious subject matter. See In re Kerkhoven at 850. There is nothing in the record to indicate any nonobvious or surprising result of combining the ingredients that are old and well known in the art used for the same purposes, and thus the rejections should be maintained.

Applicants' arguments are based on inaccurate recounts of examiner's reasons for maintaining the obviousness rejections that were previously stated in the Office actions. Applicants' assertion that no explanation of examiner's disagreement was given in the final Office Action is erroneous. Examiner clearly indicated in the final rejection that, in response to applicants' repetitive rebuttal arguments examiner

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maintains the rejection for the same reasons as stated in the previous Office Action dated February 11, 2002, Response to Arguments, page 5, lines 1-3. In the February 11, 2002 Office action, examiner had stated, in response to applications assertion that no "clear and particular" reasons to combine the references exist, that the obviousness of combining the teachings flows from the teaching of the specific use of the ingredients in the art.

Applicants rely on the holding in In re Lee to argue that examiner bears high burden to show specific objective evidences. Examiner takes the position that Lee is inapplicable in this case. See 61 U.S.P.Q. 2d 1430 (C.A. F.C. 2002). That case involved a method of automatically displaying the functions of a video display device and demonstrating how to select and adjust the functions in order to facilitate response by the user. The examiner in that case made rejections although the collective teachings of the cited references did not teach how to adjust the functions of audio or pictures, and the court held that the factual question of motivation could not be resolved on *subjective belief and unknown authority*. See Lee at 1434. Unlike the Lee case, the present obviousness rejection is supported by objected teachings and suggestions of Dalle and Zviak. In the instant case, all the claim limitations are taught by the references, and the motivation to combine the references flow from the fact that the claimed ingredients are used for the same purposes.

To assert that the rejection is an impermissible hindsight, applicants disregarded the legal authority adverse to their position that examiner had cited in the previous Office actions. The court in In re McLaughlin held that an examiner's reconstruction is

proper so long as the reconstruction takes into account only knowledge which was within the level of ordinary skill at the time the invention was made, and does not include knowledge gleaned only from applicants' disclosure. See 443 F.2d 1392, 170 U.S.P.Q. 209 (C.C.P.A. 1971). Under McLaughlin, the present rejection is proper because they are based on the objective teachings and suggestions of the prior arts and not from applicants' disclosure. Examiner asserts that a skilled artisan does not need not know the applicants' disclosure in order to combine the Dalle silicone copolymer and Zviak non-cellulose thickeners; the motivation to do so is found in the teaching in the references themselves that both ingredients are conventionally used in shampoo formulations.

Applicants argue that there is no motivation to alter the Dalle silicone emulsion for producing the final product with desired viscosity. In response to applicant's arguments against the references individually, examiner notes that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, Zviak teaches that it is well known in the art to use viscosity modifiers such as the non-cellulose thickeners in making shampoo products. Given the teaching that the Dalle silicone copolymers are useful in making hair care products such as shampoo, a skilled artisan would have been motivated to look to the prior art such as Zviak and employed the thickeners that are conventionally used in shampoo formulations.

While applicants assert that not all shampoos use the same ingredients, examiner takes the position that that this statement alone does not show patentability of the present invention. There is no evidence in the record to indicate that combining the Dalle silicone emulsion and the Zviak non-cellulose thickeners, both of which are known for formulating shampoos, produces nonobvious or surprising results.

B. Issue 2: Claims 1-17, 19, 20, 22, 24, and 101-104 rejected under 35 U.S.C. (a) over Dalle in view of Quack.

While applicants argue that no clear and particular motivation to combine the references exists, applicants fail to acknowledge the facts in this case. Dalle teaches that the silicone copolymer recited in the instant claims is useful in personal care products, which includes skin creams, lotions, cleansers, sunscreens, hair shampoos and conditioners. See Dalle, p. 5, lines 46 - 57. Quack teaches the non-cellulose thickeners such as the copolymers of acrylamide or acrylic acids and polyethylene glycols are old and well-known thickeners commonly used in same type of cosmetic formulations such as hand lotion, cleanser, and shampoo. See Quack, col. 3, line 8- col. 4, line 27. The idea for combining them flows logically from their having been used individually in the skin lotions, cleansers, or shampoo art. See In re Kerkhoven at 850. Examiner asserts that the rejection should be maintained because the objective teachings of the references provide a skilled artisan motivation to combine the Dalle silicone copolymers and the Quack non-cellulose thickeners to formulate the cosmetic compositions with desired viscosity, and also because applicants have produced no evidence to show nonobvious or surprising results in the combination.

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C. Issue 3: Claims 1-19, 22, 23, 25-36, and 101-104 rejected under 35 U.S.C. § 103 (a) over Dalle in view of Mougin

Applicants argue that the rejection lacks any clear and particular motivation to combine the teachings of Dalle with those of Mougin, allegedly because the teachings in the references are too general. Examiner respectfully disagrees, and notes that applicants' assertion that Mougin merely discloses the use of the prior art thickeners in mascara is erroneous. The reference in fact teaches the broader application of the silicone-grafted polyurethane and/or polyurea block polycondensation products in formulating the specific hair care products and make-up compositions. See Mougin, col. 14, line 63 – col. 15, line 27. The application of the Dalle invention includes making the same type of personal care products and cosmetic make-up compositions disclosed in Mougin. The idea for combining the silicone copolymer with thickener flows logically from their having been used individually in the personal care or cosmetic art. See In re Kerkhoven at 850. Examiner asserts that the facts do not support applicants' position and that a prima facie obviousness case has been established here.

D. Claims 37-63 rejected under 35 U.S.C. § 103 (a) over Dalle in view of Mougin, and further in view of Restle.

In response to applicants' assertion that the combined teaching does not teach or suggest the claimed viscosity range, examiner notes the only viscosity limitation in the instant claims is the viscosity of the silicone copolymers itself, and not the viscosity of the whole composition, as applicants appear to suggest in the brief. There is no dispute as to whether the applicants' silicone copolymer is different from the Dalle

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invention. The Dalle reference even specifically teaches that the viscosity of the polysiloxane is preferably $1 - 1 \times 10^6$ /mm² sec at 25°C, which is the same viscosity of the polysiloxane required in applicants' invention. See Dalle, p. 3, lines 18-19. The viscosity of the resulting silicone copolymer thus should be within the range recited in the claims.

Applicants argue that Dalle teaches away from using cationic surfactants, allegedly because of the general comment in the reference regarding a previously known polymerization technology. See Dalle, p. 2, lines 7-20. Examiner notes that the disclosure of the potential irritability of the surfactants and instability effects thereof refer to the drawback of the emulsion polymerization, and not of the alleged disadvantages of using the Restle cationic surfactants with the Dalle silicone copolymers.

The Dalle reference in fact teaches to use quaternary ammonium cationic surfactants in p. 4, lines 26 – 36, and Restle teaches the specific quaternary ammonium surfactants recited in the instant claims and the beneficial cosmetic effects thereof, which includes enhanced penetration of active cosmetic ingredients on hair and glossy appearance without greasy feel and softness. See Restle, col. 1, lines 36-49. The collective teachings of the references provide ample motivation to produce applicants' invention, and thus the obviousness rejection here is proper. The rejection should be maintained.

E. Issue 5: Claims 64-100 rejected under 35 U.S.C. § 103(a) over Dalle in view of Mougin, and further in view of Decoster

Applicants again fail to acknowledge the facts in this case. Applicants' assertion that there exists no reason to combine the references is erroneous because all of the references in fact teach personal cleansing compositions and the method of using thereof. Here, Decoster plainly teaches that the applicants' surfactants are conventionally used in personal cleansing compositions. See Decoster, See col. 1, line 1 – col. 2, line 28; col. 3, lines 1-31; col. 3, line 32 - col.4, line 13; col. 4, lines 14-38. As discussed above, each of the Dalle and Mougin references teaches the applicability of the respective invention in formulating personal cleansing compositions also. The motivation to combine the silicone copolymer and non-cellulose thickeners with the cleansing surfactants in Decoster flows from that these components are individually known and used in personal cleansing art. See In re Kerkhoven at 850. Examiner asserts that it is prima facie obvious that the collective teachings of the references would have motivated a skilled artisan to combine the teachings of the references to formulate a cosmetic cleansing composition.

For the above reasons, it is believed that the rejections should be sustained.


Respectfully submitted,

Gina C. Yu
August 22, 2003

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FULL TEXT OF CASES (USPQ2D)

All Other Cases

In re Lee, 61 USPQ2d 1430 (CA FC 2002)

In re Lee, 61 USPQ2d 1430 (CA FC 2002)

61 USPQ2D 1430

In re Lee

U.S. Court of Appeals Federal Circuit

No. 00-1158

Decided January 18, 2002

Headnotes

PATENTS

[1] Practice and procedure in Patent and Trademark Office — Board of Patent Appeals and Interferences — In general (§110.1101)

Patentability/Validity — Obviousness — Combining references (§115.0905)

Patentability/Validity — Obviousness — Evidence of (§115.0906)

Rejection of patent application for obviousness under 35 U.S.C. §103 must be based on evidence comprehended by language of that section, and search for and analysis of prior art includes evidence relevant to finding of whether there is teaching, motivation, or suggestion to select and combine references relied on as evidence of obviousness; factual inquiry whether to combine references must be thorough and searching, based on objective evidence of record, and Board of Patent Appeals and Interferences must explain reasons why one of ordinary skill in art would have been motivated to select references and to combine them to render claimed invention obvious.

[2] Patentability/Validity — Obviousness — Combining references (§115.0905)

JUDICIAL PRACTICE AND PROCEDURE

Procedure — Judicial review — Standard of review — Patents (§410.4607.09)

Board of Patent Appeals and Interferences improperly relied upon “common knowledge and common sense” of person of ordinary skill in art to find invention of patent application obvious over combination of two prior art references, since factual question of motivation to select and combine references is material to patentability, and could not be resolved on subjective belief and unknown authority, since deferential review of agency decisions under Administrative Procedure Act reinforces obligation of board to develop evidentiary basis for its findings, since board's rejection of need for any specific hint or suggestion in particular reference to support combination constituted omission of relevant factor required by precedent, and thus was both legal error and arbitrary agency action, since board's findings must extend to all material facts and be documented on record, and since “common knowledge and common sense” are not specialized knowledge and expertise of agency contemplated by APA, and may not be substituted for evidence, although they may be applied to analysis of evidence.

PATENTS

[3] Practice and procedure in Patent and Trademark Office —Board of Patent Appeals and Interferences — In general (§110.1101)

Patentability/Validity — Obviousness — Evidence of (§115.0906)

JUDICIAL PRACTICE AND PROCEDURE

Procedure — Judicial review — Standard of review —Patents (§410.4607.09)

Patent examiners and Board of Patent Appeals and Interferences, in relying on what they assert to be general knowledge to negate patentability on ground of obviousness, must articulate that knowledge and place it on record, since examiners and board are presumed

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to act from viewpoint of person of ordinary skill in art in finding relevant facts, assessing significance of prior art, and making ultimate determination of obviousness issue; failure to do so is not consistent with either effective administrative procedure or effective judicial review, and board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth rationale on which it relies.

[4] Procedure — Court of Appeals for the Federal Circuit (§410.03)

Procedure — Judicial review — Standard of review —Patents (§410.4607.09)

U.S. Court of Appeals for the Federal Circuit will not consider proposed alternative grounds for affirming decision of Board of Patent Appeals and Interferences rejecting patent application for obviousness, since alternative grounds were made at oral argument and constitute post hoc rationalization for agency action, consideration of which would deprive aggrieved party of fair opportunity to support its position.

Case History and Disposition

Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Patent application of Sang-Su Lee, serial no. 07/631,210, directed to method of automatically displaying functions of video display device and demonstrating how to select and adjust functions to facilitate user response. Applicant appeals from decision upholding rejection of all claims for obviousness, and from reaffirmation of that decision on reconsideration. Reversed and remanded.

Attorneys:

Richard H. Stern and Robert E. Bushnell, Washington, D.C., for Sang Su Lee.

Sidney O. Johnson Jr., associate solicitor, John M. Whealan, solicitor, and Raymond T. Chen, Maximilian R. Peterson, and Mark Nagumo, associate solicitors, Arlington, Va., for Director of U.S. Patent and Trademark Office.

Judge:

Before Newman, Clevenger, and Dyk, circuit judges.

Opinion Text

Opinion By:

Newman, J.

Sang-Su Lee appeals the decision of the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office, rejecting all of the claims of Lee's patent application Serial No. 07/631,210 entitled "Self-Diagnosis and Sequential-Display Method of Every Function." ¹We vacate the Board's decision for failure to meet the adjudicative standards for review under the Administrative Procedure Act, and remand for further proceedings.

The Prosecution Record

Mr. Lee's patent application is directed to a method of automatically displaying the functions of a video display device and demonstrating how to select and adjust the functions in order to facilitate response by the user. The display and demonstration are achieved using computer-managed electronics, including pulse-width modulation and auto-fine-tuning pulses, in accordance with procedures described in the specification. Claim 10 is representative:

10. A method for automatically displaying functions of a video display device, comprising:
determining if a demonstration mode is selected;
if said demonstration mode is selected, automatically entering a picture adjustment mode having a picture menu screen displaying a list of a plurality of picture functions; and
automatically demonstrating selection and adjustment of individual ones of said plurality of picture functions. The examiner rejected the claims on the ground of obviousness, citing the combination of two references: United States Patent No. 4,626,892 to Nortrup, and the Thunderchopper Helicopter Operations Handbook for a video game. The Nortrup reference describes a television set having a menu display by which the user can adjust various picture and audio functions; however, the Nortrup display does not include a demonstration of how to adjust the functions. The Thunderchopper Handbook describes the Thunderchopper game's video display as having a "demonstration mode" showing how to play the game; however, the Thunderchopper Handbook makes no mention of the adjustment of picture or audio functions. The examiner held that it

would have been obvious to a person of ordinary skill to combine the teachings of these references to produce the Lee system.

Lee appealed to the Board, arguing that the Thunderchopper Handbook simply explained how to play the Thunderchopper game, and that the prior art provided no teaching or motivation or suggestion to combine this reference with Nortrup, or that such combination would produce the Lee invention. The Board held that it was not necessary to present a source of a teaching, suggestion, or motivation to combine these references or their teachings. The Board stated:

The conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference. Board op. at 7. The Board did not explain the “common knowledge and common sense” on which it relied for its conclusion that “the combined teachings of Nortrup and Thunderchopper would have suggested the claimed invention to those of ordinary skill in the art.”

Lee filed a request for reconsideration, to which the Board responded after five years. The Board reaffirmed its decision, stating that the Thunderchopper Handbook was “analogous art” because it was “from the same field of endeavor” as the Lee invention, and that the field of video games was “reasonably pertinent” to the problem of adjusting display functions because the Thunderchopper Handbook showed video demonstrations of the “features” of the game. On the matter of motivation to combine the Nortrup and Thunderchopper references, the Board stated that “we maintain the position that we stated in our prior decision” and that the Examiner's Answer provided “a well reasoned discussion of why there is sufficient motivation to combine the references.” The Board did not state the examiner's reasoning, and review of the Examiner's Answer reveals that the examiner merely stated that both the Nortrup function menu and the Thunderchopper demonstration mode are program features and that the Thunderchopper mode “is user-friendly” and it functions as a tutorial, and that it would have been obvious to combine them.

Lee had pressed the examiner during prosecution for some teaching, suggestion, or motivation in the prior art to select and combine the references that were relied on to show obviousness. The Examiner's Answer before the Board, plus a Supplemental Answer, stated that the combination of Thunderchopper with Nortrup “would have been obvious to one of ordinary skill in the art since the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software,” and that “another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial.” The Board adopted the examiner's answer, stating “the examiner has provided a well reasoned discussion of these references and how the combination of these references meets the claim limitations.” However, perhaps recognizing that the examiner had provided insufficient justification to support combining the Nortrup and Thunderchopper references, the Board held, as stated *supra*, that a “specific hint or suggestion” of motivation to combine was not required.

This appeal followed.

Judicial Review

Tribunals of the PTO are governed by the Administrative Procedure Act, and their rulings receive the same judicial deference as do tribunals of other administrative agencies. *Dickinson v. Zurko*, 527 U.S. 150, 50 USPQ2d 1930 (1999). Thus on appeal we review a PTO Board's findings and conclusions in accordance with the following criteria:

5 U.S.C. §706(2) The reviewing court shall—

- (2) hold unlawful and set aside agency actions, findings, and conclusions found to be—
 - (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

* * * *

- (E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute;

For judicial review to be meaningfully achieved within these strictures, the agency tribunal must present a full and reasoned explanation of its decision. The agency tribunal

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must set forth its findings and the grounds thereof, as supported by the agency record, and explain its application of the law to the found facts. The Court has often explained:

The Administrative Procedure Act, which governs the proceedings of administrative agencies and related judicial review, establishes a scheme of "reasoned decisionmaking." Not only must an agency's decreed result be within the scope of its lawful authority, but the process by which it reaches that result must be logical and rational. *Allentown Mack Sales and Service, Inc. v. National Labor Relations Bd.*, 522 U.S. 359, 374 (1998) (citation omitted). This standard requires that the agency not only have reached a sound decision, but have articulated the reasons for that decision. The reviewing court is thus enabled to perform meaningful review within the strictures of the APA, for the court will have a basis on which to determine "whether the decision was based on the relevant factors and whether there has been a clear error of judgment." *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 416 (1971). Judicial review of a Board decision denying an application for patent is thus founded on the obligation of the agency to make the necessary findings and to provide an administrative record showing the evidence on which the findings are based, accompanied by the agency's reasoning in reaching its conclusions. See *In re Zurko*, 258 F.3d 1379, 1386, 59 USPQ2d 1693, 1697(Fed. Cir. 2001) (review is on the administrative record); *In re Gartside*, 203 F.3d 1305, 1314, 53 USPQ2d 1769, 1774(Fed. Cir. 2000) (Board decision "must be justified within the four corners of the record").

[1] As applied to the determination of patentability *vel non* when the issue is obviousness, "it is fundamental that rejections under 35 U.S.C. §103 must be based on evidence comprehended by the language of that section." *In re Grasselli*, 713 F.2d 731, 739, 218 USPQ 769, 775(Fed. Cir. 1983). The essential factual evidence on the issue of obviousness is set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966) and extensive ensuing precedent. The patent examination process centers on prior art and the analysis thereof. When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See, e.g., *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351-52, 60 USPQ2d 1001, 1008(Fed. Cir. 2001) ("the central question is whether there is reason to combine [the] references," a question of fact drawing on the *Graham* factors).

"The factual inquiry whether to combine references must be thorough and searching." *Id.* It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with. See, e.g., *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25, 56 USPQ2d 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'") (quoting *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232(Fed. Cir. 1998)); *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617(Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."); *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637(Fed. Cir. 1998) (there must be some motivation, suggestion, or teaching of the desirability of making the specific combination that was made by the applicant); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600(Fed. Cir. 1988) ("teachings of references can be combined *only* if there is some suggestion or incentive to do so.") (emphasis in original) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933(Fed. Cir. 1984)).

The need for specificity pervades this authority. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317(Fed. Cir. 2000) (“particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed”); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459(Fed. Cir. 1998) (“even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination.”).

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In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious.”); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783(Fed. Cir. 1992) (the examiner can satisfy the burden of showing obviousness of the combination “only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references”).

[2] With respect to Lee's application, neither the examiner nor the Board adequately supported the selection and combination of the Nortrup and Thunderchopper references to render obvious that which Lee described. The examiner's conclusory statements that “the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software” and that “another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial” do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to “[use] that which the inventor taught against its teacher.” *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion.

Deferential judicial review under the Administrative Procedure Act does not relieve the agency of its obligation to develop an evidentiary basis for its findings. To the contrary, the Administrative Procedure Act reinforces this obligation. *See, e.g., Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 43 (1983) (“the agency must examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)); *Securities & Exchange Comm'n v. Chenery Corp.*, 318 U.S. 80, 94 (1943) (“The orderly function of the process of review requires that the grounds upon which the administrative agency acted are clearly disclosed and adequately sustained.”).

In its decision on Lee's patent application, the Board rejected the need for “any specific hint or suggestion in a particular reference” to support the combination of the Nortrup and Thunderchopper references. Omission of a relevant factor required by precedent is both legal error and arbitrary agency action. *See Motor Vehicle Manufacturers*, 463 U.S. at 43 (“an agency rule would be arbitrary and capricious if the agency ... entirely failed to consider an important aspect of the problem”); *Mullins v. Department of Energy*, 50 F.3d 990, 992 (Fed. Cir. 1995) (“It is well established that agencies have a duty to provide reviewing courts with a sufficient explanation for their decisions so that those decisions may be judged against the relevant statutory standards, and that failure to provide such an explanation is grounds for striking down the action.”). As discussed in *National Labor Relations Bd. v. Ashkenazy Property Mgt. Corp.*, 817 F.2d 74, 75 (9th Cir. 1987), an agency is “not free to refuse to follow circuit precedent.”

The foundation of the principle of judicial deference to the rulings of agency tribunals is that the tribunal has specialized knowledge and expertise, such that when reasoned findings are made, a reviewing court may confidently defer to the agency's application of its knowledge in its area of expertise. Reasoned findings are critical to the performance of agency functions and judicial reliance on agency competence. *See Baltimore and Ohio R. R. Co. v. Aberdeen & Rockfish R. R. Co.*, 393 U.S. 87, 91-92 (1968) (absent reasoned findings based on substantial evidence effective review would become lost "in the haze of so-called expertise"). The "common knowledge and common sense" on which the Board relied in rejecting Lee's application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act. Conclusory statements such as those here provided do not fulfill the agency's obligation. This court explained in *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697, that "deficiencies of the cited references cannot be remedied by

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the Board's general conclusions about what is 'basic knowledge' or 'common sense.'" The Board's findings must extend to all material facts and must be documented on the record, lest the "haze of so-called expertise" acquire insulation from accountability. "Common knowledge and common sense," even if assumed to derive from the agency's expertise, do not substitute for authority when the law requires authority. *See Allentown Mack*, 522 U.S. at 376 ("Because reasoned decisionmaking demands it, and because the systemic consequences of any other approach are unacceptable, the Board must be required to apply in fact the clearly understood legal standards that it enunciates in principle")

The case on which the Board relies for its departure from precedent, *In re Bozek*, 416 F.2d 1385, 163 USPQ 545 (CCPA 1969), indeed mentions "common knowledge and common sense," the CCPA stating that the phrase was used by the Solicitor to support the Board's conclusion of obviousness based on evidence in the prior art. *Bozek* did not hold that common knowledge and common sense are a substitute for evidence, but only that they may be applied to analysis of the evidence. *Bozek* did not hold that objective analysis, proper authority, and reasoned findings can be omitted from Board decisions. Nor does *Bozek*, after thirty-two years of isolation, outweigh the dozens of rulings of the Federal Circuit and the Court of Customs and Patent Appeals that determination of patentability must be based on evidence. This court has remarked, in *Smiths Industries Medical Systems, Inc. v. Vital Signs, Inc.*, 183 F.3d 1347, 1356, 51 USPQ2d 1415, 1421 (Fed. Cir. 1999), that *Bozek's* reference to common knowledge "does not in and of itself make it so" absent evidence of such knowledge.

[3] The determination of patentability on the ground of unobviousness is ultimately one of judgment. In furtherance of the judgmental process, the patent examination procedure serves both to find, and to place on the official record, that which has been considered with respect to patentability. The patent examiner and the Board are deemed to have experience in the field of the invention; however, this experience, insofar as applied to the determination of patentability, must be applied from the viewpoint of "the person having ordinary skill in the art to which said subject matter pertains," the words of section 103. In finding the relevant facts, in assessing the significance of the prior art, and in making the ultimate determination of the issue of obviousness, the examiner and the Board are presumed to act from this viewpoint. Thus when they rely on what they assert to be general knowledge to negate patentability, that knowledge must be articulated and placed on the record. The failure to do so is not consistent with either effective administrative procedure or effective judicial review. The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.

Alternative Grounds

[4] At oral argument the PTO Solicitor proposed alternative grounds on which this court might affirm

the Board's decision. However, as stated in *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962), "courts may not accept appellate counsel's *post hoc* rationalization for agency action." Consideration by the appellate tribunal of new agency justifications deprives the aggrieved party of a fair opportunity to support its position; thus review of an administrative decision must be made on the grounds relied on by the agency. "If those grounds are inadequate or improper, the court is powerless to affirm the administrative action by substituting what it considers to be a more adequate or proper basis." *Securities & Exchange Comm'n v. Chenery Corp.*, 332 U.S. 194, 196 (1947). As reiterated in *Federal Election Comm'n v. Akins*, 524 U.S. 11, 25 (1998), "If a reviewing court agrees that the agency misinterpreted the law, it will set aside the agency's action and remand the case — even though the agency (like a new jury after a mistrial) might later, in the exercise of its lawful discretion, reach the same result for a different reason." Thus we decline to consider alternative grounds that might support the Board's decision.

Further Proceedings

Sound administrative procedure requires that the agency apply the law in accordance with statute and precedent. The agency tribunal must make findings of relevant facts, and present its reasoning in sufficient detail that the court may conduct meaningful review of the agency action. In *Radio-Television News Directors Ass'n v. FCC*, 184 F.3d 872 (D.C.

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Cir. 1999) the court discussed the "fine line between agency reasoning that is 'so crippled as to be unlawful' and action that is potentially lawful but insufficiently or inappropriately explained," quoting from *Checkosky v. Securities & Exch. Comm'n*, 23 F.3d 452, 464 (D.C. Cir. 1994); the court explained that "[i]n the former circumstance, the court's practice is to vacate the agency's order, while in the latter the court frequently remands for further explanation (including discussion of the relevant factors and precedents) while withholding judgment on the lawfulness of the agency's proposed action." *Id.* at 888. In this case the Board's analysis of the Lee invention does not comport with either the legal requirements for determination of obviousness or with the requirements of the Administrative Procedure Act that the agency tribunal set forth the findings and explanations needed for "reasoned decisionmaking." Remand for these purposes is required. *See Overton Park*, 401 U.S. at 420-221 (remanding for further proceedings appropriate to the administrative process).

VACATED AND REMANDED

Footnotes

1 *Ex parte Lee*, No. 1994-1989 (Bd. Pat. App. & Int. Aug. 30, 1994; on reconsid'n Sept. 29, 1999).

- End of Case -

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